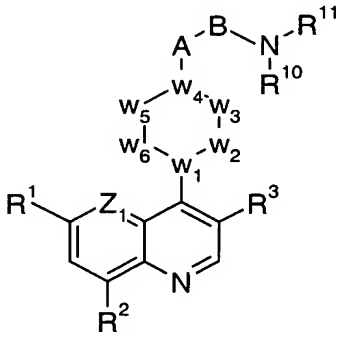
Amendments to the claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended): A compound of formula (I)



(I)

wherein:

Z_1 is N or CR^{1a};

R^1 and R^{1a} are independently hydrogen; hydroxy; (C_{1-6})alkoxy unsubstituted or substituted by (C_{1-6})alkoxy, hydroxy, amino, piperidyl, guanidino or amidino any of which is unsubstitued or N-substituted by one or two (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, $CONH_2$, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6})alkylsulphonyloxy; (C_{1-6})alkoxy-substituted(C_{1-6})alkyl; halogen; (C_{1-6})alkyl; (C_{1-6})alkylthio; trifluoromethyl; trifluoromethoxy; nitro; azido; cyano; acyl; acyloxy; acylthio; (C_{1-6})alkylsulphonyl; (C_{1-6})alkylsulphoxide; arylsulphonyl; arylsulphoxide; or an amino, piperidyl, guanidino or amidino group unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl or (C_{1-6})alkylsulphonyl groups; or R^1 and R^{1a} may together form ethylenedioxy;

provided that when Z_1 is CR^{1a} then R^1 is not H;

R^2 is H or halogen;

provided that when Z_1 is N, then R^2 is H;

R^3 is hydrogen; halogen; hydroxy; cyano; CF_3; nitro; azido; acyl; aryl; heteroaryl; CO_2H; acyoxy; acylthio; (C_{1-6})alkyl unsubstituted or substituted by one or two (C_{1-6})alkoxy, hydroxy, amino, piperidyl, guanidino or amidino any of which is ~~unsubstitued~~ unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, $CONH_2$, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6})alkylsulphonyloxy; (C_{1-6})alkoxy unsubstituted or substituted by one or two (C_{1-6})alkoxy, hydroxy, amino, piperidyl, guanidino or amidino any of which is ~~unsubstitued~~ unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, $CONH_2$, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6})alkylsulphonyloxy; (C_{3-7})cycloalkyl; (C_{1-6})alkoxy-substituted(C_{1-6})alkyl; (C_{1-6})alkylthio; trifluoromethoxy; (C_{1-6})alkylsulphonyl; (C_{1-6})alkylsulphoxide; arylsulphonyl; or arylsulphoxide; or an amino, piperidyl, guanidino or amidino group unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl or (C_{1-6})alkylsulphonyl groups;

w_1 is N, C, or CR^4;
w_2 is C=O, CR^4, or CR^4R^5;
w_3 is C=O or CR^4R^5;
w_4 is N or CR^4;
w_5 is C=O or CR^4R^5;
w_6 is C=O, CR^4, or CR^4R^5;

~~Alternatively~~ or, one of W2, W3, W5 and W6 is $CR^4R^5CR^4R^5$ and the others are defined as above;

wherein each R^4 and R^5 is independently hydrogen; halogen; hydroxy; cyano; CF_3; nitro; azido; acyl; aryl; heteroaryl; CO_2H; acyoxy; acylthio; (C_{1-6})alkyl unsubstituted or substituted by one or two (C_{1-6})alkoxy, hydroxy, amino, piperidyl, guanidino or amidino any of which is ~~unsubstitued~~ unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, $CONH_2$, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6})alkylsulphonyloxy; (C_{1-6})alkoxy unsubstituted or substituted by one or two (C_{1-6})alkoxy, hydroxy, amino, piperidyl, guanidino or amidino any of which is unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl,

$CONH_2$, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6})alkylsulphonyloxy; (C_{3-7})cycloalkyl; (C_{1-6})alkoxy-substituted(C_{1-6})alkyl; (C_{1-6})alkylthio; trifluoromethoxy; (C_{1-6})alkylsulphonyl; (C_{1-6})alkylsulphoxide; arylsulphonyl; or arylsulphoxide; or an amino, piperidyl, guanidino or amidino group unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl or (C_{1-6})alkylsulphonyl groups; or two R^5 groups are joined together to form bicycloheptane;

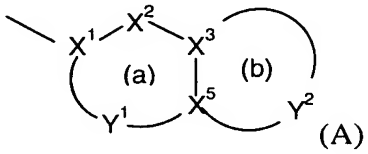
A is CR^6R^7 or C(O);
B is CR^8R^9 or C(O);

wherein R^6, R^7, R^8, and R^9 are independently hydrogen; halogen; hydroxy; cyano; CF_3; nitro; azido; acyl; aryl; heteroaryl; CO_2H; acyoxy; acylthio; (C_{1-6})alkyl unsubstituted or substituted by one or two (C_{1-6})alkoxy, hydroxy, amino, piperidyl, guanidino or amidino any of which is ~~unsubstitued~~ unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, $CONH_2$, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6})alkylsulphonyloxy; (C_{1-6})alkoxy unsubstituted or substituted by one or two (C_{1-6})alkoxy, hydroxy, amino, piperidyl, guanidino or amidino any of which is unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, $CONH_2$, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6})alkylsulphonyloxy; (C_{3-7})cycloalkyl; (C_{1-6})alkoxy-substituted(C_{1-6})alkyl; (C_{1-6})alkylthio; trifluoromethoxy; (C_{1-6})alkylsulphonyl; (C_{1-6})alkylsulphoxide; arylsulphonyl; or arylsulphoxide; or an amino, piperidyl, guanidino or amidino group unsubstituted or N-substituted by one or two (C_{1-6})alkyl, acyl or (C_{1-6})alkylsulphonyl groups;

R^{10} is hydrogen; aryl; heteroaryl; (C_{1-6})alkyl unsubstituted or substituted by one or two (C_{1-6})alkoxy, hydroxy, amino, piperidyl, piperazinyl, morpholino, guanidino, or amidino, any of which is unsubstituted or N-substituted by one or two aryl, heteroaryl, halogen, cyano, CF_3, unsubstituted (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, arylsulphonyl, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy, or (C_{1-6})alkylsulphonyloxy, ~~so long as~~ provided that the substitution does not lead to an unstable

compound; (C_{1-6})alkoxy-substituted(C_{1-6})alkyl; hydroxy-substituted(C_{1-6})alkyl; (C_{1-6})alkylcarbonyl; (C_{2-6})alkenylcarbonyl; (C_{1-6})alkoxycarbonyl; CO_2H; or CF_3;

R^{11} is a group -U-R^{12} where R^{12} is a substituted or unsubstituted bicyclic carbocyclic or heterocyclic ring system (A):



(A)

containing up to four heteroatoms in each ring in which

at least one of rings (a) and (b) is aromatic;

X^1 is C or N when part of an aromatic ring or CR^{14} when part of a non aromatic ring;

X^2 is N, NR^{13}, O, $S(O)_x$, CO or CR^{14} when part of an aromatic or non-aromatic ring or may in addition be $CR^{14}R^{15}$ when part of a non aromatic ring;

X^3 and X^5 are independently N or C;

Y^1 is a 0 to 4 atom linker group each atom of which is independently selected from N, NR^{13}, O, $S(O)_x$, CO and CR^{14} when part of an aromatic or non-aromatic ring or may additionally be $CR^{14}R^{15}$ when part of a non aromatic ring,

Y^2 is a 2 to 6 atom linker group, each atom of Y^2 being independently selected from N, NR^{13}, O, $S(O)_x$, CO and CR^{14} when part of an aromatic or non-aromatic ring or may additionally be $CR^{14}R^{15}$ when part of a non aromatic ring;

each of R^{14} and R^{15} is independently selected from: H; (C_{1-4})alkylthio; halo; (C_{1-4})alkyl; (C_{2-4})alkenyl; hydroxy; hydroxy(C_{1-4})alkyl; mercapto(C_{1-4})alkyl; (C_{1-4})alkoxy; trifluoromethoxy; nitro; cyano; carboxy; amino or aminocarbonyl unsubstituted or substituted by ~~(C_{1-4})alkyl.~~ (C_{1-4})alkyl;

each R^{13} is independently H; trifluoromethyl; (C_{1-4})alkyl unsubstituted or substituted by hydroxy, carboxy, (C_{1-4})alkoxy, (C_{1-6})alkylthio, halo or trifluoromethyl; (C_{2-4})alkenyl; or aminocarbonyl wherein the amino group is optionally substituted (C_{1-4})alkyl;

each x is independently 0, 1 or 2;

U is CO, SO_2, CH_2, or $CR^{16}R^{17}$;

R^{16} and R^{17} are independently selected from H; aryl; heteroaryl; (C_{1-6})alkyl; (C_{1-6})alkyl substituted by (C_{1-6})alkoxy, hydroxy, amino, piperidyl, piperazinyl, morpholino, guanidino, or amidino, any of which is substituted or N-substituted by one or two H, aryl, heteroaryl, halogen, cyano, CF_3, (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, arylsulphonyl, hydroxy, (C_{1-6})alkylthio, heterocyclylthio, heterocyclyloxy, arylthio, aryloxy, acylthio, acyloxy, or (C_{1-6})alkylsulphonyloxy, ~~so long as~~ provided that the substitution does not lead to an unstable compound; (C_{1-6})alkoxy-substituted(C_{1-6})alkyl; hydroxy-substituted(C_{1-6})alkyl; amino-substituted(C_{1-6})alkyl, which is N-substituted by one or two (C_{1-6})alkyl, acyl, (C_{1-6})alkylsulphonyl, or arylsulphonyl; (C_{1-6})alkylcarbonyl; (C_{2-6})alkenylcarbonyl; (C_{1-6})alkoxycarbonyl; CO_2H; or CF_3; or

a pharmaceutically acceptable salt ~~or salts~~ thereof.

2. (Currently amended): A compound or salt according to claim 1, wherein R^1 is F, Cl, OCH_3, methyl, or SCH_3.

3. (Currently amended): A compound or salt according to claim 1, wherein R^{1a} is H, OCH_3, or $OCH_2CH_2OCH_3$.

4. (Currently amended): A compound or salt according to claim 1, wherein R^2 is H or F.

5. (Currently amended): A compound or salt according to claim 1, wherein R^3 is Cl or F.

6. (Currently amended): A compound or salt according to claim 1, wherein each R^4 is independently H, OH, OCH_3, or CH_2OH.

7. (Currently amended): A compound or salt according to claim 1, wherein R^5 is H.

8. (Currently amended): A compound or salt according to claim 1, wherein the group –U– is $–CH_2–$.

9. (Currently amended): A compound or salt according to claim 1, wherein R^{12} is:
benzo[1,2,5]thiadiazol-5-yl;
4H-benzo[1,4] thiazin-3-one-6-yl;
2,3-dihydro-benzo[1,4]dioxin-6-yl;
benzo[1,2,3]thiadiazol-5-yl;
3-oxo-3,4-dihydro-2H-benzo[1,4]oxazin-6-yl;
7-fluoro-3-oxo-3,4-dihydro-2H-benzo[1,4] oxazin-6-yl;
2-oxo-2,3-dihydro-1H-pyrido[2,3-b][1,4]thiazin-7-yl;
2,3-Dihydro-[1,4]dioxino[2,3-c]pyridin-7-yl;
3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-yl;
[1,2,3]thiadiazolo[5,4-b]pyridin-6-yl;
3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazin-6-yl;
7-chloro-3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazin-6-yl; or
7-fluoro-3-oxo-3,4-dihydro-2*H*-pyrido[3,2-*b*][1,4]thiazin-6-yl.

10. (Currently amended): A compound according to claim 1, wherein the compound is:

6-({2-[1-(6-methoxyquinolin-4-yl)piperidin-4-yl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

6-({2-[1-(6-methoxyquinolin-4-yl)piperidin-4-yl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

(2,3-dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-{2-[1-(6-methoxyquinolin-4-yl)piperidin-4-yl]ethyl}amine;

6-({2-[1-(6-methoxynaphthyridin-4-yl)piperidin-4-yl]ethylamino} methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

6-({2-[1-(6-methoxynaphthyridin-4-yl)piperidin-4-yl]ethylamino} methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

(2,3-dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-{2-[1-(6-methoxynaphthyridin-4-yl)piperidin-4-yl]ethyl}amine;

6-({2-[1-(3-chloro-6-methoxy-[1,5]quinolin-4-yl)phenyl] ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

6-({2-[1-(3-chloro-6-methoxy-[1,5]quinolin-4-yl)phenyl] ethylamino} methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

{2-[1-(3-chloro-6-methoxyquinolin-4-yl)piperidin-4-yl]ethyl}-(2,3-dihydro[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)amine;

6-({2-[1-(3-chloro-6-methoxy-[1,5]naphthyridin-4-yl)phenyl] ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

6-({2-[1-(3-chloro-6-methoxy-[1,5]naphthyridin-4-yl)phenyl] ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

{2-[1-(3-chloro-6-methoxynaphthyridin-4-yl)piperidin-4-yl]ethyl}-(2,3-dihydro[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)amine;

6-({2-[4-(6-methoxyquinolin-4-yl)piperazin-1-yl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

6-({2-[4-(6-methoxyquinolin-4-yl)piperazin-1-yl]ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

(2,3-dihydro-[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)-{2-[4-(6-methoxyquinolin-4-yl)piperizin-1-yl]ethyl}amine;

6-({2-[4-(6-methoxynaphthyridin-4-yl)piperazin-1-yl] ethylamino} methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

6-({2-[4-(6-methoxynaphthyridin-4-yl)piperazin-1-yl] ethylamino} methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

(2,3-dihydro-[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)-{2-[4-(6-methoxynaphthyridin-4-yl)piperizin-1-yl]ethyl}amine;

6-({2-[4-(3-chloro-6-methoxyquinolin-4-yl)piperazin-1-yl] ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

6-({2-[4-(3-chloro-6-methoxyquinolin-4-yl)piperazin-1-yl] ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

{2-[4-(3-chloro-6-methoxyquinolin-4-yl)piperazin-1-yl]ethyl}-(2,3-dihydro[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)amine;

6-({2-[4-(3-chloro-6-methoxynaphthyridin-4-yl)piperazin-1-yl] ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]oxazin-3-one;

6-({2-[4-(3-chloro-6-methoxynaphthyridin-4-yl)piperazin-1-yl] ethylamino}methyl)-4*H*-pyrido[3,2-*b*][1,4]thiazin-3-one;

{2-[4-(3-chloro-6-methoxynaphthyridin-4-yl)piperazin-1-yl]ethyl}-(2,3-

dihydro[1,4]dioxino[2,3-*c*]pyridin-7-ylmethyl)amine;

6-({2-[4-(6-Methoxy-[1,5]naphthyridin-4-yl)-3,6-dihydro-2 H -pyridin-1-yl]-2-oxo-ethylamino}-methyl) -4 H -pyrido[3,2-b][1,4]thiazin-3-one;

N-(2-{1-[6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl}ethyl)-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazine-6-carboxamide;

N-(2-{1-[6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl}ethyl)-3-oxo-3,4-dihydro-2H-1,4-benzothiazine-6-sulfonamide;

N-methyl-N-(2-{1-[6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl} ethyl)-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazine-6-carboxamide;

N-methyl-N-(2-{1-[6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl} ethyl)-3-oxo-3,4-dihydro-2H-1,4-benzothiazine-6-sulfonamide;

N-(2-{1-[3-chloro-6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl} ethyl)-3-oxo-3,4-dihydro-2H-1,4-benzothiazine-6-sulfonamide;

7-{[(2-{4-[6-(methyloxy)-1,5-naphthyridin-4-yl]-1-piperazinyl}ethyl) oxy] methyl}-2,3-dihydro[1,4]dioxino[2,3-c]pyridine;

N-(2-{4-[6-(methyloxy)-1,5-naphthyridin-4-yl]-1-piperazinyl}ethyl)-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazine-6-carboxamide;

N-methyl-N-(2-{4-[6-(methyloxy)-1,5-naphthyridin-4-yl]-1-piperazinyl}ethyl)-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazine-6-carboxamide;

N-(2-{4-[6-(methyloxy)-1,5-naphthyridin-4-yl]-1-piperazinyl}ethyl)-3-oxo-3,4-dihydro-2H-1,4-benzothiazine-6-sulfonamide;

N-methyl-N-(2-{4-[6-(methyloxy)-1,5-naphthyridin-4-yl]-1-piperazinyl} ethyl)-3-oxo-3,4-dihydro-2H-1,4-benzothiazine-6-sulfonamide;

6-{[(2-{4-[6-(methyloxy)-1,5-naphthyridin-4-yl]hexahydro-1H-1,4-diazepin-1-yl}ethyl)amino]methyl}-2H-pyrido[3,2-b][1,4]thiazin-3(4H)-one;

N-(2-{4-[6-(methyloxy)-1,5-naphthyridin-4-yl]hexahydro-1H-1,4-diazepin-1-yl}ethyl)-3-oxo-3,4-dihydro-2H-1,4-benzothiazine-6-sulfonamide;

6-{[(2-{(1R,4R)-5-[6-(methyloxy)-1,5-naphthyridin-4-yl]-2,5-diazabicyclo [2.2.1]hept-2-yl}ethyl)amino]methyl}-2H-pyrido[3,2-b][1,4]thiazin-3(4H)-one;

6-[({1-[6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl}amino) methyl]-2H-pyrido[3,2-b][1,4]thiazin-3(4H)-one;

6-{[(2-{4-hydroxy-1-[6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl}ethyl) amino]methyl}-2H-pyrido[3,2-b][1,4]thiazin-3(4H)-one;

6-{[(2-{4-hydroxy-1-[6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl}ethyl) amino]methyl}-2H-pyrido[3,2-b][1,4]oxazin-3(4H)-one;

N-(2-{4-hydroxy-1-[6-(methyloxy)-1,5-naphthyridin-4-yl]-4-piperidinyl} ethyl)-3-oxo-3,4-dihydro-2H-1,4-benzothiazine-6-sulfonamide;

6-{[(2-{4-[7-fluoro-6-(methyloxy)-1,5-naphthyridin-4-yl]-1-piperazinyl} ethyl) amino]methyl}-2H-pyrido[3,2-b][1,4]thiazin-3(4H)-one; or

6-{[(2-{4-[7-fluoro-6-(methyloxy)-1,5-naphthyridin-4-yl]-1-piperazinyl} ethyl)amino]methyl}-2H-pyrido[3,2-b][1,4]oxazin-3(4H)-one; or

a pharmaceutical salt ~~or salts~~ thereof.

11. (Currently amended): A pharmaceutical composition, comprising a compound or salt according to claim 1 and a pharmaceutically acceptable carrier.

12. (Currently amended): A method of treating bacterial infections in mammals, which comprises ~~administrating~~ administering to a mammal in need thereof an effective amount of a compound or salt according to claim 1.